

smaller, long-decurrent, and finally evident as slight alar prominences). The rhizome scales are similarly fuscous, but those of *P. subtile* are shorter, relatively broader, and more persistently ciliate. The thin, peltate, flake-like, cretaceous scales, overlying the hydathodes singly, are characteristic of both species.

Some experiences in fern-hunting near Philadelphia

GEORGE REDLES

(As narrated at the Fern Society meeting, Dec. 28, 1914)

It was with some misgivings that I complied with Mr. Scott's order to address you, and I think the best thing I can do will be to relate some of my experiences.

Mr. Joseph Meehan claimed that *Aspidium Goldieanum*, as figured in Meehan's Monthly, was too narrow in outline and did not agree with any specimens that he had seen. As he, Edwin Jellett, and myself took botanical trips together, we were very anxious to find some of this species in our rambles. As we had canvassed most of the locality within twenty miles without results, we began to despair of ever finding it, though Prof. Meehan claimed the specimen figured had been collected in the Wissahickon. One Sunday, after a most delightful trip along Edge Hill to the Pennypack, Joseph remarked: "Wouldn't it be a grand ending to a perfect day to find some *Goldieanum*?", and, while drinking from a spring which ran down along a gentle slope, I noticed a number of extra large ferns growing in the water among stones and proceeded to investigate. On picking a frond and looking for the spore-cases, I found them to be very close to the mid-vein and on my showing it to Joseph, he let out a "Hurrah!" and said: "We have found it

at last." It proved to be the best clump I have ever seen, and the plants bore out what he had contended. We visited the locality this fall and were sorry to find a fire had swept through it. I am afraid the colony has gone forever.

I have since found three plants in the Wissahickon which have endured for ten years and are there still. I also came across a fine clump at Cold Spring Harbor while residing at Oyster Bay.

Of course, we were anxious to find *Asplenium ebenoides*, now called Scott's fern. The place of its original discovery has been destroyed and our discovery of it was longer delayed than that of *Aspidium Goldieanum* by a number of years—in fact, the original trio had ceased to explore together. It was while with two other companions in the vicinity of Marshall's Creek, Monroe Co., that we came across two fine specimens. Of course, I brought one away with me and grew it in a four-inch pot and for three years it thrived finely. But when I moved to Long Island I took it along and for no reason that I could see, it immediately started on a down grade and after two summers over there it perished, far from its native state.

Camptosorus, one of the supposed parents of *A. ebenoides*, as claimed by some, I have found to be common, if wide distribution makes it common. I have found it on almost every tramp of any extent in a west and northerly direction.

I have also had some interesting experiences in connection with trips to Quaker Bridge after *Schizaea* and other things of interest to be found there. In late July or early August, Prof. Stewardson Brown says, the railroad station at Atsion is about the hottest place this side of the hereafter, and the walk of four Jersey miles, through soft white sand, tormented by countless myriads of mosquitoes and a few black flies, makes the

arrival at the bridge, with its cool, coffee-colored, cedar swamp water, like reaching an oasis in the Sahara. One feels as if gallons would be insufficient to slake one's thirst; and it is no hardship, after such a walk, to go floundering around in the sphagnum and water up to your knees in search of the smallest fern that grows, around the bases of the swamp cedars. The Egg Harbor station is like going into a parlor along side of the effort necessary to be successful at Quaker Bridge.

It was while trying to get a little relief from the hordes of mosquitoes that pestered us, that we found it was delightfully cool ten yards in among the cedars and, from some unexplained cause, the mosquitoes were almost entirely absent. There I found that rarity, *Habenaria integra*, a single plant growing and blooming in the dense shade.

I will conclude by mentioning a single plant of *Pellaea atropurpurea* growing in a crevice of a cliff at Dark Hollow along the Neshaminy Creek, which remained for close to twenty years alone, as I never found any more anywhere in the vicinity.

PHILADELPHIA, PA.

Notes and news

A REVIEW: THE FERNS OF ALLEGHENY COUNTY, PENNSYLVANIA.* By L. S. HOPKINS.

In his "Ferns of Allegheny County," Mr. Hopkins has issued a very interesting and attractively illustrated little manual. It comprises a total of 130 pages of which about half are half-tone plates. Some of these plates are from herbarium specimens, some from live plants in their natural state. Nearly all of these pic-

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